U.S. SERIAL NO.: 08/458,978
FILED: June 2, 1995
AMENDMENT

Appendix: Claims as pending upon entry of the amendment

1. (twice amended) A method of inhibiting mechanisms involved in restenosis of a blood vessel following injury to vascular tissue in a region of the blood vessel of a patient in need of treatment thereof [without needing restoration of the endothelial cell lining of the blood vessel,] comprising:

implanting a biocompatible matrix having seeded therein or thereon dissociated endothelial cells at a site adjacent to the injury to vascular tissue, wherein the endothelial cells are provided in an amount effective to inhibit smooth muscle cell proliferation at the site of the injury without migration of the endothelial cells to the arterial lining.

2. The method of claim 1 wherein the injury arises from angioplasty, coronary artery bypass surgery, peripheral bypass surgery, or organ transplantation.

3. (twice amended) The method of claim 1 wherein the matrix is in a form selected from the group consisting of gels [or] , foams, suspensions, microcapsules, solid polymeric supports, [or] and fibrous structures.

4. The method of claim 1 wherein the cells are obtained by biopsy of the patient into which the matrix is implanted.

5. The method according to claim 1 wherein the matrix is biodegradable.

6. (twice amended) The method of claim 5 wherein the matrix is formed of a material selected from the group consisting of polyhydroxy acids, polyorthoesters, polyanhydrides, proteins, carbohydrates [or] , and polysaccharides, polyphosphazenes, polyalkylene oxides and combinations thereof.

7. The method of claim 1 wherein the matrix is formed of a material selected from the group consisting of ethylene vinyl acetate, polyvinyl alcohol, silicone, polyurethane, non-biodegradable polyesters, polyethyleneoxide-polypropyleneoxide, tetrafluoroethylene and combinations thereof.

8. (twice amended) The method of claim 1 wherein the matrix further comprises biologically active compounds selected from the group consisting of [,] prostaglandins, prostanoids, [compounds regulating the renin-angiotensin axis,] tyrosine kinase inhibitors, immunosuppressants, glucocorticoids, anti-oxidants, free radical scavengers, peptide hormones, angiogenic and angiogenic inhibitory factors, and combinations thereof.

9. The method of claim 1 wherein the cells are first cultured in the matrix *in vitro*, then implanted *in vivo*.

10. The method of claim 1 wherein the matrix is surgically implanted around the blood vessel.

11. (twice amended) A composition for inhibiting mechanisms involved in restenosis of a blood vessel following injury to vascular tissue of the blood vessel in a patient in need of treatment thereof, comprising a biocompatible matrix shaped for implantation adjacent to a blood vessel, the matrix having seeded therein or thereon dissociated endothelial

cells, wherein the endothelial cells are in an amount effective to inhibit smooth muscle cell proliferation at the site of the injury without migration of the endothelial cell to the arterial lining.

12. The composition of claim 11 wherein the amount is effective to treat an injury arising from angioplasty, coronary artery bypass surgery, peripheral bypass surgery, or organ transplantation.

13. (twice amended) The composition of claim 11 wherein the matrix is in a form selected from the group consisting of gels [or], foams, suspensions, microcapsules, solid polymeric supports, [or] and fibrous structures.

14. (amended) The composition of claim 11 wherein the cells are selected from the group consisting of autologous cells, allograft cells, and xenograft cells[, and genetically engineered cells].

15. The composition according to claim 1 wherein the matrix is biodegradable.

16. (twice amended) The composition of claim 15 wherein the matrix is formed of a material selected from the group consisting of polyhydroxy acids, polyorthoesters, polyanhydrides, proteins, carbohydrates [or], polysaccharides, polyphosphazenes, and combinations thereof.

17. The composition of claim 11 wherein the matrix is formed of a material selected from the group consisting of ethylene vinyl acetate, polyvinyl alcohol, silicone, polyurethane, non-biodegradable polyesters, polyethyleneoxide-polypropyleneoxide, tetrafluoroethylene, and combinations thereof.

18. (twice amended) The composition of claim 11 wherein the matrix further comprises biologically active compounds selected from the group consisting of prostaglandins, prostanoids, [compounds regulating the renin-angiotensin axis,] tyrosine kinase inhibitors, immunosuppressants, glucocorticoids, anti-oxidants, free radical scavengers, peptide hormones, angiogenic and angiogenic inhibitory factors.

20. (new) The composition of claim 14 wherein the cells are genetically engineered.